

Table A-21. Total (Federal plus company and other) funds for industrial R&D performance in the U.S. as a percent of net sales of companies that performed industrial R&D in the U.S., by industry and size of company, ranked by size of R&D program: 2001

Page 1 of 1

Industry and size of company	NAICS codes	Total (Federal plus company and other) R&D funds ¹			Total (Federal plus company and other) R&D funds as a percent of net sales		
		First 4 companies	Next 4 companies	Next 12 companies	First 4 companies	Next 4 companies	Next 12 companies
		[In millions of dollars]			[Percent]		
Distribution by industry:							
All industries	21-23, 31-33, 42, 44-81	19,639	14,866	23,932	13.9	7.2	6.6
Manufacturing	31-33	19,427	12,052	17,274	14.3	5.1	5.3
Food	311	771	237	322	1.0	0.4	0.5
Beverage and tobacco products	312	119	31	1	0.4	0.6	0.1
Textiles, apparel, and leather	313-16	59	37	55	1.0	0.9	1.7
Wood products	321	103	11	8	1.4	0.3	0.2
Paper, printing and support activities	322, 323	2,198	194	154	3.7	0.5	0.7
Petroleum and coal products	324	994	51	2	0.5	(D)	0.0
Chemicals	325	5,318	3,926	3,510	7.9	8.3	6.0
Basic chemicals	3251	475	283	475	2.2	7.6	2.3 (S)
Resin, synthetic rubber, fibers, and filament	3252	2,227	204	83	7.4	1.7	1.0
Pharmaceuticals and medicines	3254	5,294	2,577	1,449	8.1	7.6	9.1
Other chemicals	325 minus (3251-52, 3254)	1,672	352	431	5.4	3.2	2.4
Plastics and rubber products	326	622	178	211	4.4	2.2	2.3
Nonmetallic mineral products	327	216	84	91	1.4	2.0	1.3
Primary metals	331	251	60	79	1.0	0.8	0.5
Fabricated metal products	332	719	180	200	3.9	1.9	0.9
Machinery	333	2,261	769	961	9.4	5.5	3.8
Computer and electronic products	334	16,490	4,348	6,311	21.0	9.0	7.9
Computers and peripheral equipment	3341	1,797	430	378	6.8	9.8	6.0
Communications equipment	3342	9,616	893	1,129	20.9	15.1	11.0
Semiconductor and other electronic components	3344	5,876	1,840	2,676	12.9	6.2	15.7
Navigational, measuring, electromedical, and control instruments	3345	7,470	1,816	1,330	13.4	19.1	11.9
Other computer and electronic products	334 minus (3341-42, 3344-45)	264	61	44	13.8	8.7	3.4
Electrical equipment, appliances, and components	335	2,147 (S)	329	404	2.2 (S)	2.1	2.8
Transportation equipment	336	14,391	5,775	3,631	4.0	9.0	4.2
Motor vehicles, trailers, and parts	3361-63	13,581	1,860 (S)	906	4.2	6.3	1.7
Aerospace products and parts	3364	6,275	1,295	287	5.6	7.8	4.0
Other transportation equipment	336 minus (3361-64)	681 (S)	116	50	3.5	1.7 (S)	1.2

See explanatory information and SOURCE at end of table.

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		[In millions of dollars]			[Percent]		
Distribution by industry:							
Furniture and related products	337	131	58	38	1.0 (S)	1.0	0.8
Miscellaneous manufacturing	339	3,930	649	699	13.7	7.4	4.4
Medical equipment and supplies	3391	3,930	626	512	13.7	7.7 (S)	6.3
Other miscellaneous manufacturing	339 minus (3391)	321	84	95	3.1	2.7	2.1
Other manufacturing	31-33 minus (311-16, 321-27, 331-37, 339)	--	--	--	--	--	--
Nonmanufacturing	21-23, 42, 44-81	14,009	5,615	9,689	13.7	15.0	14.5
Mining, extraction, and support activities	21	713	84	40	1.8	0.5	0.7
Utilities	22	55	28	34	0.1	0.0	0.0
Construction	23	154	52	15	1.4	2.5	0.2
Trade	42, 44, 45	11,220	3,944	4,716	12.1	9.5	15.4
Transportation and warehousing	48, 49	377	27	9	0.8	0.2	0.1
Information	51	7,426	1,275	2,057	18.4	(D)	13.0
Publishing	511	6,617	856	1,679	22.2	22.3	11.1
Newspaper, periodical, book, and database	5111	376	55	23	3.7	1.4	0.3
Software	5112	6,617	856	1,600	22.2	22.3	18.2
Broadcasting and telecommunications	513	834	129	91	0.4	0.3	1.9
Radio and television broadcasting	5131	22	0	0	0.5	0.0	0.0
Telecommunications	5133	834	129	55	0.4	0.3	10.8
Other broadcasting and telecommunications	513 minus (5131, 5133)	(D)	0	0	(D)	0.0	0.0
Other information	51 minus (511, 513)	1,486	210	204	4.1	7.6	5.8
Finance, insurance, and real estate	52, 53	760	475	431	1.3	0.9	0.3
Professional, scientific, and technical services	54	4,373 (S)	1,507	2,057	22.8 (S)	115.7	30.4
Architectural, engineering, and related services	5413	1,104	379	490	44.1	53.8	14.1
Computer systems design and related services	5415	2,109 (S)	458	804	18.8 (S)	17.2	7.1
Scientific R&D services	5417	3,248	926 (S)	1,307	28.1 (S)	57.9 (S)	53.8
Other professional, scientific, and technical services	54 minus (5413, 5415, 5417)	235	71	56	(D)	(D)	1.5
Management of companies and enterprises	55	107	11	1	(D)	7.7 (S)	0.2
Health care services	621-23	284	36	30	(D)	0.6 (S)	0.5
Other nonmanufacturing	56, 61, 624, 71, 72, 81	304	97	104	2.3	3.7	0.4

See explanatory information and SOURCE at end of table.

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Page 3 of 4

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		First 4 companies	Next 4 companies	Next 12 companies	First 4 companies	Next 4 companies	Next 12 companies
		[In millions of dollars]			[Percent]		
Distribution by size of company: [Number of employees]							
Total		19,639	14,866	23,932	13.9	7.2	6.6
5 to 24		28	19	34	103.4	97.0	2.4
25 to 49		146	72	106	69.0	157.0	145.4
50 to 99		173	104	211	58.6	148.4	171.6
100 to 249		327	254	592	101.5	13.7 (S)	137.3
250 to 499		467	312	721	154.9	152.5	63.9
500 to 999		870	574	1,166	110.5	56.7	36.2
1,000 to 4,999		2,139	1,590	3,064	78.2	22.6	22.3
5,000 to 9,999		3,422	2,018	4,268	27.4	13.4	9.4
10,000 to 24,999		7,313	4,140	7,643	17.8	13.5	7.4
25,000 or more		19,639	14,866	21,576	13.9	7.2	5.8

¹ Beginning with 2001, statistics for total and Federally funded industrial R&D exclude data for Federally Funded Research and Development Centers (FFRDCs).

KEY: (D) = Data have been withheld to avoid disclosing operations of individual companies

(S) = Indicates imputation of more than 50 percent

(--) = Indicates data not collected

NOTES: Rankings were based on total (company, Federal, and other) R&D funds.

Starting in 1999, the frame from which the statistical samples were selected was divided into two partitions based on total company employment. In the manufacturing sector, companies with employment of 50 or more were included in the large company partition. In the nonmanufacturing sector, companies with employment of 15 or more were included in the large company partition. Companies in the respective sectors with employment below these values, but with at least 5 employees, were included in the small company partition. The purpose of partitioning the sample this way was to reduce the variability in industry estimates largely attributed to the random year-to-year selection of small companies by industry and the high sampling weights that sometimes were assigned to them. Because of this, in prior reports detailed industry statistics were published only from the large company partition; detailed industry statistics from the small company partition were not. Statistics from the small company partition were included in the manufacturing, nonmanufacturing, and all industries totals, but were aggregated into "small manufacturing" and "small nonmanufacturing" classifications instead of being included in their respective industry classifications. For this report, this practice was evaluated and discontinued because it was determined that the data for small companies are more useful if they are included in their respective industries even given the sampling concerns described above. Consequently, the "small manufacturing" and "small nonmanufacturing" stublines are no longer present. Statistics for the firms in the small company classifications are not shown separately in this table, but are included in the manufacturing, nonmanufacturing, and all industries totals. For more information, see the technical notes in Survey of Industrial Research and Development Methodology: 2001 at <http://www.nsf.gov/sbe/srs/sird/start.htm>

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Industrial Research and Development: 2001